


“There Are Just Too Many Rooms Here!” Perception of Clients and Health Care Workers on the Implementation of Test and Treat Strategy at Area 25 Health Center in Lilongwe, Malawi

Journal of the International Association of Providers of AIDS Care
Volume 22: 1-10
© The Author(s) 2023
Article reuse guidelines:
sagepub.com/journals-permissions
DOI: 10.1177/23259582231154224
journals.sagepub.com/home/jia


Regina Kasiya Chigona¹  and Alinane Linda Nyondo Mipando²

Abstract

Background: Malawi adopted World Health Organisation test-and-treat policy in 2016. The policy initiates early antiretroviral treatment to all clients diagnosed with HIV, irrespective of their CD4 count. However, some facilities record low linkage following the strategy. Perceptions of clients and health care workers on the implementation of test-and-treat strategy were explored in Malawi. **Methods:** A descriptive qualitative approach was conducted in which 21 in-depth interviews, 9 key informant interviews, and 15 non-participatory observations were conducted. Data were analyzed following thematic approach. **Results:** Most participants had positive perceptions of the test-and-treat strategy. However, negative perceptions stemmed from the fragmented structure of the facility with multiple rooms in which the client navigates through as well as limited privacy. **Conclusion:** Optimal implementation of the test-and-treat strategy will need to strengthen privacy and minimize unintended disclosure that is inherent in the organization of services.

Keywords

HIV and AIDS, test-and-treat, perceptions, antiretroviral therapy, Malawi

Date received: 14 September 2022; revised: 6 January 2023; accepted: 11 January 2023.

Introduction

The World Health Organization (WHO) recommended the implementation of the Universal Test-and-Treat Policy in 2015.¹ The policy asserts that all HIV-positive clients are eligible for antiretroviral treatment (ART) irrespective of their CD4 count status.¹ Many countries in the Sub-Saharan Region have adopted this policy with expectations of improving the health condition of people living with HIV and AIDS.² Evidence suggests that immediate ART initiation helps to achieve substantial suppression of virus replication in ART clients thereby reducing mortality and morbidity related to HIV and AIDS.³ Furthermore, initiating ART immediately in the asymptomatic state reduces the risks of developing cancer-related infections especially in the early stages of HIV infection.⁴

Several factors militate against early ART initiation among those living with HIV. These include fear of side effects,⁵ stigma, confidentiality,^{6,7} access due to long distances to

clinics, and uncertainty of partner's reaction upon disclosure.^{8,9} At the health system level, shortage and attitudes of health workers,¹⁰ lack of privacy, and confidentiality,⁶ are some of the structural barriers to ART initiation and adherence. On the contrary, factors that enhance initiation include: clients' prior knowledge on HIV and AIDS,¹¹ perceived good health,¹²

¹ School of Public Health and Family Medicine, University of Malawi College of Medicine, Chichiri, Blantyre, Malawi

² Lecturer - Health Systems and Policy, Director - MBA in Health Systems Management Program, Department of Health Systems and Policy, School of Public Health and Family Medicine, Kamuzu University of Health Sciences (formerly College of Medicine), Chichiri, Blantyre, Malawi

Corresponding Author:

Regina Kasiya Chigona, School of Public Health and Family Medicine, University of Malawi College of Medicine, P/Bag 360, Chichiri, Blantyre, Malawi.
Emails: reginachigona2011@gmail.com; chigonaregina@gmail.com



provider-initiated testing and counseling,¹³ and self or significant others' ill health.¹⁴

Like other countries, Malawi adopted WHO's test-and-treat policy in 2016. The policy involves offering HIV testing services to the population at risk through voluntary counseling and provider-initiated testing to all clients seeking medical services. Further, the policy entails initiating all people diagnosed with HIV on ART as soon as possible, irrespective of their CD4 count.^{1,15} While emphasizing same-day initiation when there are no clinical contraindications, most clients are initiated on ART within seven (7) days after HIV diagnosis and confirmation.¹ Area 25 clinic in Lilongwe is one of the health facilities currently implementing the test-and-treat strategy. The clinic started implementing this strategy in 2017. Although the strategy calls for immediate initiation to ART, the HIV records at this clinic showed that some clients defer treatment to a later date while others refuse to be tested. In the last quarter of the year 2018, 4330 clients were tested monthly and out of this figure, 149 were HIV infected and 125 were initiated to ART. However, there tends to be low linkage when it comes to HIV care because, for the year 2018, only 74% of clients were linked in care which was below the 90% target at the time. In addition to this, 4823 clients were initiated to ART from January 2017 to June 2019, and out of these, 613 (12.6%) ended up defaulting treatment.

It is against this background that this study sought to explore perceptions of clients and health care workers on the implementation of the test-and-treat strategy at Area 25 health center. The perceptions of clients over services received influence the uptake and compliance to the service.¹⁰ Knowledge of clients' perceptions may identify shortfalls in the provision of test-and-treat strategy, as well as any misinformation that could impede the uptake of the service and further inform the planners and implementers so that they can plan on how to improve the implementation of the strategy and care of clients.

Methods

Study Design

We conducted a descriptive qualitative study that explored lived experiences of those who had gone through the test-and-treat strategy and also employed non-participatory observations at Area 25 clinic in Lilongwe, Malawi. A total of 21 in-depth interviews (IDIs), 9 key informant interviews, and 15 non-participatory observations were conducted from March 2019 to April 2019.

Study Setting

Area 25 clinic is located in the Central West Zone of Lilongwe District in Malawi. The clinic shares boundaries with Lilongwe Teachers' Training College, Area 25C residential area, and Mgoni Market. The Malawi Ministry of Health District Health Information System shows that the area's catchment population is 130,101. Since its inception in 2006, the clinic

has registered and initiated 14,242 ART clients of which 5390 defaulted treatment. In total, the clinic has 159 members of staff, comprising 1 Medical officer, 1 Administrator, 2 Clinical officers, 32 nurses, 1 Environmental Health Officers, 36 Health Surveillance Assistants, 28 Health Diagnosis Assistants, 4 Health Management Information System Officers, 2 Laboratory Technician, 1 Dental therapist, and 37 support staff. Other services provided include antenatal care, maternity, family planning, under-five clinic, Out-Patient Department, HIV testing services, basic laboratory services, and Visual Inspection with Acetic Acid.

The clinic has partnerships with several health service providers like the Light House Trust, Baylor, University of Carolina (UNC), Mother to Mother, Malawi Epidemiology and Intervention Research Unit (MEIRU), and John Hopkins Programme for International Education in Gynecology (JHPIEGO). JHPIEGO is responsible for offering HIV testing in the community, while other partners together with the Ministry of Health staff are involved in HIV testing, ART initiation, taking viral load samples, exposed infant diagnosis, and client follow-ups. The clinic serves a cross-section of people including the working class, large and small scale business people, as well as seasonal laborers. The area has several industrial companies such as tobacco, seed, plastic, and pharmaceutical companies.¹⁶

Sampling

A total of 30 participants were included in the study comprising 9 key informants and 21 clients. They were identified using a purposive sampling approach with maximum variation in mind to achieve a greater understanding of participants' experience (Table 1). The clients were selected as they visited Area 25 clinic for various reasons on daily basis, and ended up having an HIV test through Provider Initiated Counseling and Testing (PITC) or Voluntary Counseling and Testing (VCT).

Selection and Recruitment of Participants

We included participants that were 18 years and above, willing to give consent and provide information, and able to communicate in English or Chichewa. The identification of participants was done during their visit to the clinic for medical services, while that for health workers was done while they were on duty at the clinic while ensuring minimal interruption with their work.

Data Collection

The study used a semi-structured interview guide to conduct face-to-face in-depth interviews with the participants. The semi-structured guide contained open-ended questions that allowed us to elicit in-depth information from participants. Interviews were conducted at ART Department at the clinic. The sessions were recorded and field notes were also taken to capture other

Table 1. Summary Of Methods.

Sample	Method	Purpose	Sample characteristic	Sample size
Female clients	In-depth interviews	To understand the lived experience of Test-and-treat in women of different ages, levels of education, occupation, and religion.	These were from different departments: 3 from antenatal, 1 mothers from the under-Five clinic, 5 sent from the out-patient department, and 2 voluntaries (solely came for HIV testing)	11
Male clients	In-depth interviews	To understand the lived experience of Test-and-treat in men of different ages, level of education, occupation, and religion	7 men were from the out-patient department, 3 voluntarily came for HIV testing	10
Health workers	Key Informant interviews	To understand their experience of implementing Test-and-treat at the facility.	This involved health workers. from ART department. There were 2 nurses, 2 clinicians, 2 counselors 2 HIV diagnostic assistants, and 1 expert client	9

elements of data that could not be recorded and also to compare with the recorded information.¹⁷

Each session of the interview lasted between 30 and 45 min. Thereafter, key points from each session were immediately summarized and participants were requested to verify the key findings, thus making sure that the information captured was what the participants wanted to narrate.¹⁸ In this case, participants were allowed to clarify their views, make any corrections wherever required and provide any additional information when necessary. The interview guide was produced in Chichewa and English language versions and participants had to choose the version they understood better. Consent was obtained from participants before the interviews.

A total of 15 non-participatory observations were conducted while test-and-treat interventions were in progress. These were guided by the checklist that was developed from the Malawi HIV testing and counseling services guidelines and Malawi Clinical Guidelines for managing HIV and AIDS in Children and adults 2016.^{15,19}

Data Management and Credibility

Data were checked by the researcher for any errors and completeness. All data in hard copies were kept in a lockable cabinet, while the electronic ones were saved in Google drive and kept in a computer with a secured password. To maximize the credibility of the findings, we employed a member checking approach where key findings were summarized to a participant after an interview.^{18,20} We achieved dependability of our findings by taking field notes and recording the interview to achieve a real account of our findings.²¹ The collection and description of the study setting promoted the transferability of our results.²¹

Data Analysis

Data were analyzed thematically as outlined by Braun and Clarke.²¹ This involved searching through the data set from a range of texts to identify a repeated pattern(s) with meanings.²¹

Thematic analysis was chosen among other methods, because of its ability to identify and capture interesting and important patterns with meaning.²² In the first place, all recorded audios were transcribed verbatim while the Chichewa version was translated into English. Main codes were then deductively extracted from the objectives and inductively extracted from the data.²² Thereafter, all the transcripts were read several times to ensure familiarity with the data. At this time, the researcher took some notes and marked preliminary ideas for codes that described the content and also made early impressions. Participants' responses were summarized as per the topic and initial codes were generated by identifying the data that had repeated patterns. The identified text was then selected and labeled within each data set. Codes were assigned to the data and matched with the section of the interview. After this, the researcher looked for themes from the codes by repeatedly reading the list of codes and related extracts. Codes were then moved back and forth to form different themes. Additionally, codes were collated into broader themes that were interesting about the data.²² Themes were then reviewed to check if they made sense in the placed categories and also to check for any contradiction and overlapping. During this process, themes that were richly supported with data were maintained, those with similar meaning were combined, broad and contradictory themes were split and those that did not make sense were discarded. The data set was reviewed again to verify if themes were related to data.²¹ At this stage, the researcher identified aspects of the data that were captured, and what was interesting in the themes. Themes were checked to see how they fitted in with each other to tell a story about the collected data. Themes were then refined, organized, and named.

Ethical Considerations

Ethical approval to conduct the study was granted by the College of Medicine Research Ethics Committee (COMREC) with the reference number of COMREC P.01/20/2921 and this was submitted to Lilongwe District Health Officer

(DHO). Consent was sought from all participants and consent forms were signed before each interview. No names were indicated on data collection tools to maintain privacy and confidentiality. Also, participants were told that they were not compelled to participate in the study and were free to withdraw from the study at any point in the process if they wished to do that.

Results

Demographic Characteristics of Clients

Of the 21 clients included in the study, 14 were HIV positive, 12 initiated ART immediately while two opted to delay. Eleven were females, 19 were Christians, and two were Muslims. Sixteen participants were married, nine had primary school level education, eight had secondary school education while four studied up to college level. The majority of the participants were self-employed and six were formally employed. Participants' age ranged from 20 to 46 years, with a median of 32 and an interquartile range of 26–38. All participants were able to read and write.

Demographic Characteristics of Health Workers

Of the nine health workers, five were females. Four were Presbyterians, two were Roman Catholics, three were Pentecostals, while one Anglican. One participant was educated to secondary school level while eight studied up to college level. There were two registered nurses, two clinicians, two HDAs, two counselors, and one expert client. Their age ranged from 23 to 61, with 34 as a median while the interquartile range was 26–45. All health workers had more than one year of work experience in the ART department. The least experienced worker had one year three months experience, while the most experienced had fifteen years of experience.

Theme 1. Perceptions on Test-and-Treat Strategy

The majority of clients and health workers expressed positive perceptions on test-and-treat strategy while a few had reservations over it. Participants stated that the strategy was effective and appreciated it for allowing one to initiate ART while in good health which yields positive outcomes unlike in cases when one initiates when one is already sick. The narrative below indicates the findings.

“I feel that the strategy is very good. In the past, we have seen many people starting ARVs when they were very sick and could not make it because the body was already weak. When you start ARVs while your body is still strong, you remain healthy and people cannot know that you are on medication unless you tell them.” **Client.0425**

Health workers also concurred with clients and indicated that immediate ART initiation has helped clients to quickly achieve viral suppression, restore immune function, and reduced HIV mortality, this is evidenced below:

“I feel that this test-and-treat is a good initiative. Once clients have started ARVs immediately and follow the prescribed dose and frequency, their immunity does not drop. As of now, HIV mortality has dropped because of this strategy”. **Health worker 4024.**

However, there were very few clients who expressed negative perceptions of the strategy. They were concerned with the initiation of ARVs when one is not sick because they feared that if a person takes ARVs for a longer duration and while healthy, one will have adverse effects.

“Mmmm! To start ARVs while you are not sick is not a good idea because you will take it for a long time since it is for life and you can have a lot of problems since the body is healthy. It is better to wait until you start showing some signs so that you don't harm your body by exposing it to strong drugs”. **Client 0800**

Some participants concluded that starting ARVs while healthy can lead to defaulting from treatment because one cannot easily appreciate the importance of drugs unless one is ill and gets better. As explained below:

“I think that taking ARVs while you are not sick, is not good because, for somebody who has never experienced serious illness, cannot appreciate the importance of taking drugs and can think of stopping anytime unlike somebody who has been sick on and off, he/she can be taking the ARVs faithfully to avoid the sickness he/ she had experienced before. As for me, I will commence treatment because of the condition I have (skin rash). I am afraid that maybe if I do not start taking ARVs, it can become worse”. **Client 0012**

Perceptions on the Structure of the Facility and Flow of Test-and-Treat Strategy

Some participants expressed concerns about the structure of the hospital and how the test-and-treat strategy is implemented. It was noted that as per guidelines, irrespective of the purpose of the visit to the facility, clients whose serostatus is not known, were requested to have an HIV test. As illustrated in Figure 1, the client navigates through multiple rooms, they start from the HIV testing room which is either at maternity, antenatal, Out-Patient Department (OPD), or at Voluntary Counseling and Testing (VCT), and all these rooms are located within the main hospital building which is 100 meters away from the ART department which is in building 2, as shown in Figure 1. Clients with HIV-negative results are counseled on HIV preventive measures like condom use and Voluntary Male Medical Circumcision (VMMC) before leaving for home while those with HIV-positive results go to the ART department to access the services. In the ART department, a client navigates through four other rooms and although they are near each other, they are located in a conspicuous place whereby others can see clients as they move from one room to the other. Participants stated that it would have been better if

testing and treatment was being done in the same room and not moving to several rooms because it can create stigma:

There are just too many rooms here. You come here for testing, they send you to the other side of the hospital for medication. And when you go there, they give you a file in one room, you take ARVs from another room, register in another room. Other people can deduce that if somebody is going in this direction it means he is HIV positive. This is too much. They should just do all those things in one room because when one has tested HIV positive, you become worried, so for you to be moving from one room to the other, I feel that they are delaying me. They should just test and give us medication in one room, off we go. **Client 5733**

Health workers also concurred with clients on the structure of the ART infrastructure. One health worker said that the testing rooms are isolated from linkage, registration, and initiation rooms and that the distance in between, makes them tired when escorting clients.

This distance from the testing rooms to registration and ART initiation rooms is a problem. Imagine when we have ten new patients per day, it means you will be moving ten times escorting them for registration, and we become tired. It would be better if we can have testing rooms and the rest of the rooms in one place. **Health worker 0734**

Observations

Out of the 15 observations, eleven clients were HIV positive and they were escorted to the ART department for linkage and registration. All clients initiated ART except two, of which one wanted to notify the husband first and the other one did not believe the results and he wanted to have another test somewhere else. The non-participant observations showed that after HIV testing in building 1 (main hospital building), a client with positive results navigates to building 2 (ART department) and s/he enters room 2, where his/her details are recorded. Registration and issuance of a file/master card are completed in room 3 while the client meets the expert clients for further counseling in room 4. The process finishes in either rooms 5, 6, or 7 where ARVs are collected. In each room, there are health workers and the client does not get attended to by the same staff.

All rooms were spacious and well-ventilated except one at the antenatal clinic which was very small and had poor ventilation. Protocols, guidelines, and procedures concerning the test-and-treat policy were present in all the rooms. All ART providers (Nurses and Clinicians), HDAs, and counselors were certified by the Ministry of Health. It was observed that most clients came in through provider-initiated testing and counseling (PITC). Other methods included: Voluntary Counseling and Testing (VCT) and Prevention from Mother to Child Transmission (PMTCT).

Health workers were able to establish a good rapport with clients at the beginning of every procedure. They carried positive body language that was manifested by smiling faces, steady strides, expressive gestures, and convincing nods. Their verbal

language was gentle and they allowed clients to express their views. In general, health workers demonstrated a good attitude and politeness. Pre-test counseling was done to prepare clients for an HIV test. The researcher noted that most clients received the necessary information during pre-test counseling. However, two incidents were observed in which health workers just went straight to HIV testing without pre-test counseling. The researcher is of the view that this was done to attend to many clients who queued outside, waiting for the same service in that particular room. In three observations, the researcher noted a lack of privacy as the door was not locked and there was high traffic of fellow health workers in the HIV testing room and which disrupted the conversation.

After the HIV test, clients with negative results were advised to come after a month for re-testing and they were also counseled on preventive measures to help them remain negative. However, the researcher noted that three clients with negative results were just released without post-test counseling.

Theme 2: Benefits of a Test-and-Treat Strategy

Both health workers and clients reported on the benefits of test-and-treat and these were categorized at the individual, community, and health facility levels.

Benefits of Test-and-Treat Strategy to the Individual

Participants stated that the test-and-treat strategy is beneficial because once one starts taking ARVs immediately, the viral replication is suppressed and there are increased immune cells that protect individuals from frequent sickness. They further said that immediate ART initiation helps individuals to be healthy and strong and they can manage to do income-generating activities and support their families.

“Once you start taking ARVs immediately, your immunity will go up and the viruses cannot multiply fast, as a result, the person cannot immediately develop AIDS”. **Client 2342**

Health workers also concurred with clients on individual benefits of the test-and-treat strategy. They shared their views according to the experience they have had when following up and taking care of clients enrolled on test-and-treat strategy. They explained that most clients enrolled on the test-and-treat strategy, do not develop opportunistic infections immediately because HIV is easily suppressed.

“From experience, the strategy is helping clients to have their viral load suppressed earlier as a result, the risk of developing opportunistic infections becomes low unlike in the past when we had to wait for the CD4 to drop.” **Health worker 2348**

Benefits of Test-and-Treat to the Community

Some participants said that the test-and-treat strategy is beneficial to the community because ARVs help people to be healthy,

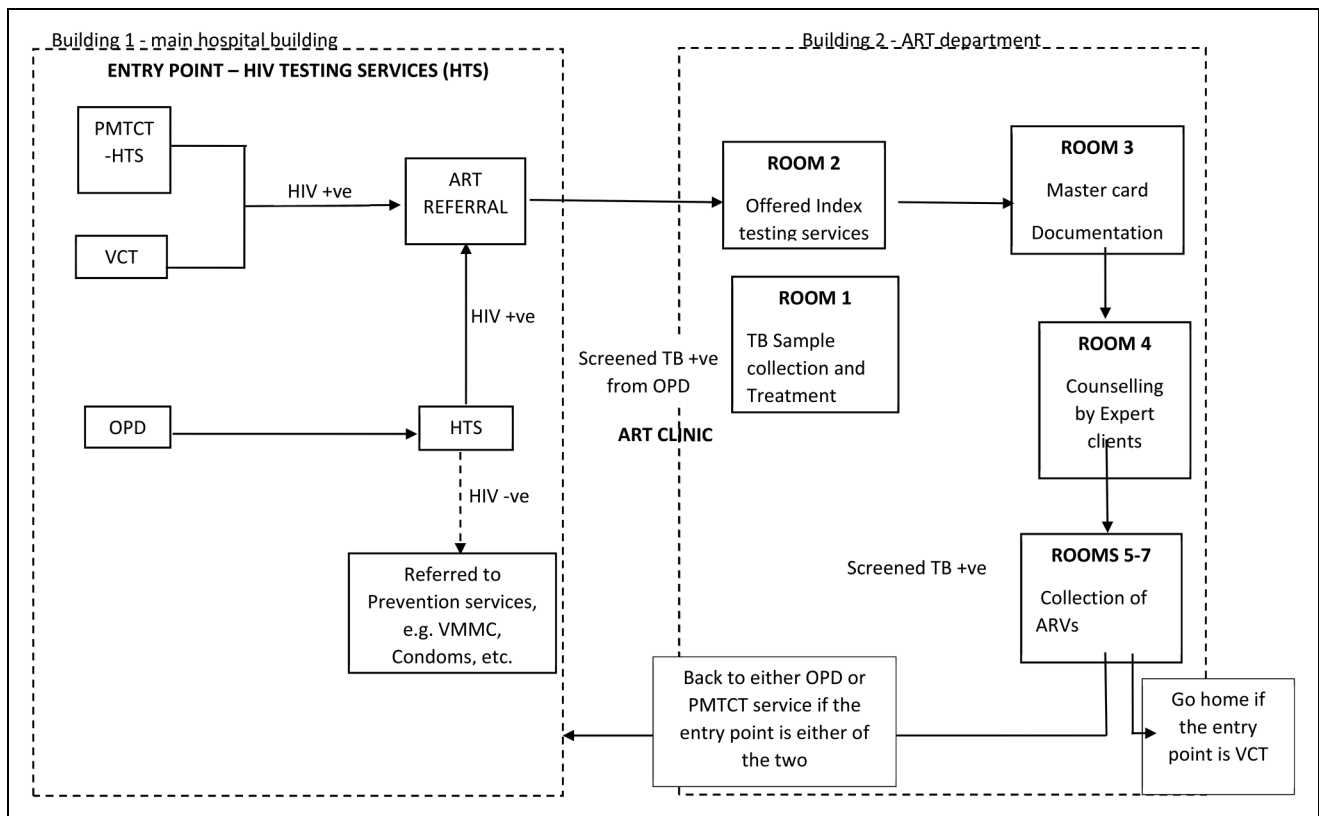


Figure 1. HIV testing and ART client flow.

strong, and participate in developmental activities that are available in the community, just like any other person.

“At a community level, test and treat are beneficial because once people start taking ARVs, they can work, as well as participate in developmental activities and take care of their families.” **Client 2117**

Some respondents explained that the test-and-treat approach reduces stigma and discrimination in a community because once clients have started taking ART, they will not have visible signs of sickness and they will be able to mix up and associate with others in the community.

“I think that the program is good and it can assist in the reduction of stigma and discrimination in our communities. If someone has started ARVs while still strong, he/she will remain healthy and as long as he/she has revealed to few trusted family members, it means other people will not recognize him/her, as a result, people will not talk about him/her, and he/she will be free to mix up with anybody in the community.” **Client 4102**

Benefits of Test-and-Treat to the Health Facility

Participants narrated that the test-and-treat approach has the potential to decongest the hospital and the costs incurred when patients are hospitalized. They said that if more people are tested for HIV, and start ARVs immediately there is a

greater chance of reducing the workload for the health workers which will also impact the budget of a hospital secondary to a reduction in the number of opportunistic infections requiring the purchase of supplies. The narrative below explains the findings:

The strategy is beneficial to the hospital because once more people are tested for HIV and initiate on ART immediately, only a few people will fall sick and the cost for drugs and other supplies will be reduced, health workers will be able to take care of the few people who happen to fall sick.” **Client 5652**

Health workers also shared the same views as the participants and stated that a test-and-treat strategy can help to improve the quality of care at the facility level. Health workers agreed that if HIV-infected people immediately start medication, there will be a reduction in HIV morbidity that will lead to a reduced workload for health workers.

“In Malawi, doctors are very few. If one doctor is treating more than 50 patients, per day, it means there will be no quality of care unlike when the number of patients is 15 or 20 per day. If many people are tested and start medication immediately, very few people will fall sick hence reduced workload, and doctors can give the quality of care to patients.” **Health worker 2707**

Discussion

The study found that most participants had positive perceptions of the test-and-treat strategy. However, others demonstrated negative perceptions of the strategy as well as the structure of the facility and flow of test-and-treat. Inadequate privacy, limited pretest, and post-test counseling were some of the challenges in implementing the approach. Some of the benefits of the test-and-treat strategy include; early viral suppression, reduced stigma as well as reduced congestion in the hospital, and the costs incurred when patients are hospitalized. These benefits have been classified at the individual, health facility, and community level.

The majority of the participants in the study expressed positive perceptions of the test-and-treat strategy. As reported in previous studies, the strategy is of pivotal importance in various aspects, for example, immediate ART initiation has led to a reduced risk of severe bacterial infections in HIV clients.^{23–25} It is therefore important that policymakers should consider empowering community leaders so that they can help to disseminate the awareness messages on the importance of test-and-treat strategy to all the people in the communities to save many lives because when people are fully aware of the service, they are in a better position to make an informed choice.²⁶

The concern on starting taking ART while healthy as expressed in our study is consistent with findings in a study done in Lusaka, Zambia where clients perceived HIV medication as poisonous and harmful. They viewed ART as insidiously harming the body and cause death which cannot be explained.²⁷ There is a need to clarify to the clients on importance and mechanism of ARVs in the body so that they should have prior knowledge. Clients' prior knowledge of the test-and-treat strategy could facilitate the uptake of HIV testing and ART. Information regarding HIV treatment, how it works in the body, and why it is best to start treatment early, could be disseminated at the Out Patient Department, through health talks and during pre-testing as well as post testing counseling. A study done in India on personal, interpersonal and structural challenges to access HIV testing, found that prior knowledge assisted clients to seek and access HIV testing, treatment, and care services.²⁶ The study further stipulates that the prior knowledge also helped clients to decide optimal adherence.²⁶ Knowledge is an important factor that influences individuals to link in HIV care. People with inadequate knowledge will have problems with uptake of HIV services because they may not understand the concept, thereby compromise the implementation of the test-and-treat strategy.²⁶

The fragmented service delivery observed in our study where HIV testing services are provided in separate buildings from ART and the navigation through numerous rooms to initiate ART leads to undue disclosure and remain a barrier. These findings are consistent with a study done in Kenya where clients disliked movement from station to station and stated that they felt that they were being tossed around.¹⁰ Navigating from one place to another and from one room to

another can lead to client dissatisfaction with service because they get bored to the extent that they would not think of going back to the clinic.¹⁰ There were insights from providers and clients regarding the fragmented service whereby they are suggesting that it would be better that HIV testing and ART initiation should be done under one roof unlike the fragmented service.

It was observed that most clients got tested for HIV through provider-initiated testing and counseling (PITC). Similarly, an earlier review revealed that PITC increased the utilization and acceptance of HIV services which in turn, promoted access to HIV prevention, care, and treatment.¹³ PITC enables health workers to recommend clients to have an HIV test irrespective of HIV symptoms and regardless of individuals' reasons for visiting the health facility. This facilitates early HIV diagnosis, treatment, and further reduces HIV morbidity, mortality as well as transmission.¹³ This study encourages all providers to implement the PITC approach so that many people should know their HIV status and be enrolled in care and treatment depending on the outcome.

Our observation that HIV-negative clients were sparingly counseled concurs with a study done in Uganda whereby clients with HIV-positive results were counseled properly unlike those who had negative results.²⁸ The danger with such practice is that HIV-negative clients may indulge themselves in risky behavior and get infected with HIV because they did not have enough information on how to prevent future HIV infection. Post-test counseling is crucial because clients acquire information on HIV prevention, treatment, care, risk reduction, as well as support depending on the results. A study done in South Africa indicated that knowledge of HIV and AIDS helped to influence treatment adherence because clients who are aware of the disease, are able to follow instructions regarding treatment.¹¹ High-risk clients with a negative HIV result are supposed to have another test after four weeks while low-risk clients are tests after a year.¹⁵ In this regard, the quality of delivery for this intervention was compromised. We, therefore, suggest that regular, clinical supervision be done at the facility level to monitor the quality of delivery

Our study found that the pre-test counseling covered aspects like mode of HIV transmission, prevention, disclosure of HIV status, treatment, and importance of testing. In this study, clients who received pre-test counseling reported satisfaction. Similar findings were reported in Zimbabwe²⁹ and South Africa³⁰ where clients reported satisfaction in HIV testing and counseling. However, we observed limited pretest counseling in some clients whereby other aspects like disclosure of HIV status, exploring clients' lifestyle, risky behaviors, and information on how to help clients to change their behavior, were omitted. This is consistent with a Kenyan study that reported limited pre-test counseling among pregnant women due to large numbers of women who needed the service.³¹

Limited pre-test counseling was observed when test-and-treat interventions were in progress. This could be attributed to workload and shortage of staff as reported in

other studies.³² We strongly believe that clients who experienced limited pre-test counseling, went away without knowledge on some of the important components of pre-test counseling for instance; the importance of disclosure, as well as risk reduction and this, can lead to ongoing HIV transmission. Intensified task-shifting could help to reduce the workload and create time for proper client counseling.³³ In addition to this, handing out leaflets to clients could help with the information left out in counseling. A systematic review done on patient information leaflets given during consultation reviewed that leaflets improve patients' knowledge and satisfaction.³⁴

Our findings on lack of privacy in the testing rooms are similar to findings from a Ghanaian study whereby some clients declined an HIV test because it was done in the open space and they were not sure whether privacy would be maintained or not.³⁵ A study done in Tanzania reported that some female sex workers who were HIV positive were reluctant to enroll in HIV care and treatment because of breach of confidentiality by health workers.³⁶ Clients complained that some health workers revealed patients' HIV statuses to other people and this led to discrimination and name-calling in the community.³⁶ Lack of privacy can create mistrust in health workers, which can lead to clients declining from accessing HIV treatment and care. It is, therefore, necessary to exercise privacy to enhance clients' satisfaction. This can be facilitated by frequent supervision of HIV services at the facility level.

Our findings that test-and-treat is very beneficial to the individuals build on the TEMPRANO and the START studies which revealed that immediate ART initiation reduces sexual HIV transmission among partners, accelerates viral suppression, and reduces severe HIV sickness as well as mortality.^{23–25} This helps clients to render support to their family members. The benefits of test-and-treat strategy at a community level as illustrated in our study are consistent with a study conducted in South Africa, where it was discovered that initiating ART immediately, helped to improve the socio-economic status of the community because people were able to concentrate on community developmental activities.³⁷ Community sensitization and awareness on the benefits of test-and-treat at the community level would assist to have more individuals enrolled on ART, and in turn, bring development to the entire community.

The potential to reduce the number of hospitalized cases which in turn reduces the workload among health workers as well as costs of running the hospital has been reported in earlier studies. A study conducted in Taiwan revealed that test-and-treat reduces the burden of very sick people in the hospital which resulted in reduced costs of hospital resources.³⁸

Strengths and Limitations

The use of in-depth interviews on clients and Key informants' interviews on health workers as well as the observations that the researcher made, helped in the understanding of the perceptions of people on test-and-treat strategy and factors that affect the implementation of this strategy. The interviews took place at hospital premises and this may have affected clients' responses

for fear of being given the low quality and unfair treatment. However, we probed for more information to understand their real perceptions and this was also augmented with non-participatory observations.

The study was done at only one health facility and this being qualitative research, the sample size is not statistically representative hence it is difficult to generalize the findings, but they can be used as building blocks for other studies.

Conclusion

The key findings of this study showed that most participants had a positive perception of the test-and-treat strategy, while others had a contrary view. The limited pre-test and post-test counseling observed may affect effective engagement in HIV services and can lead to ongoing risk among clients because some components of HIV prevention and treatment were not delivered. In addition to this, the fragmented service delivery, and the presence of multiple rooms observed in this study led to undue disclosure of HIV status and posed a barrier to the service. A good number of participants wished to have all HIV and ART services under one roof. Optimal implementation of the test-and-treat strategy will need to strengthen privacy and minimize unintended disclosure that is inherent in the organization of services.

Acknowledgements

The authors thank Dr Gerard Chigona, Governance Advisor of Embassy of Ireland, Chifundo Steve Azizi, Epidemiologist Malawi Defence Force, Jimmy Villiera, Paediatrics HIV and Oncology Clinician of Baylor Children's Foundation Malawi, and Prince Bright Majiga, Intelligence Officer, Malawi Defence Force for the technical support rendered during the study.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

ORCID iD

Regina Kasiya Chigona  <https://orcid.org/0000-0002-9365-5334>

References

1. WHO. *Guidelines for Managing Advanced HIV Disease and Rapid Initiation of Antiretroviral Therapy*. World Health Organisation; 2017.
2. Nsanzimana S, Kanters S, Mills E. Towards test and treat strategy for HIV in sub-Saharan Africa. *Br Med J*. 2015;351(7):3–15. <https://doi.org/10.1136/bmj.h6839>
3. Laurent M, Id C, Id HH, et al. Impact of "test and treat" recommendations on eligibility for antiretroviral treatment: Cross

- sectional population survey data from three high HIV prevalence countries. *Plos One*. 2018;13(11):1–14.
4. Borges ÁH, Neuhaus J, Babiker AG, et al. Immediate antiretroviral therapy reduces risk of infection-related cancer during early HIV infection. *Clin Infect Dis*. 2016;63(12):254–263. doi:10.1093/cid/ciw621
 5. Patel RC, Odoyo J, Anand K, et al. Facilitators and barriers of antiretroviral therapy initiation among HIV discordant couples in Kenya: Qualitative insights from a pre-exposure prophylaxis implementation study. *Plos One*. 2016;11(12):1–15.
 6. Turan B, Budhwani H, Fazeli PL, et al. How does stigma affect people living with HIV? The mediating roles of internalized and anticipated HIV stigma in the effects of perceived community stigma on health and psychosocial outcomes. *AIDS Behav*. 2018;21(1):283–291. doi:10.1007/s10461-016-1451-5.
 7. Nyato D, Nnko S, Komba A, et al. Facilitators and barriers to linkage to HIV care and treatment among female sex workers in a community-based HIV prevention intervention in Tanzania: A qualitative study. *Plos One*. 2019;14(11):1–14.
 8. Pell C, Vernooij E, Masilela N, Simelane N, Shabalala F, Reis R. False starts in ‘test and start’: A qualitative study of reasons for delayed antiretroviral therapy in Swaziland. *Int Health*. 2018;10(2):78–83. doi:10.1093/inthealth/ihx065
 9. Damian DJ, Ngahatilwa D, Fadhili H, et al. Factors associated with HIV status disclosure to partners and its outcomes among HIV-positive women attending Care and Treatment Clinics at Kilimanjaro region, Tanzania. *Plos One*. 2019;14(3):1–13.
 10. Oluoch RP, Mutinda D, Karama M, Oundo J, Nganga Z. Community perceptions affecting uptake & retention on antiretroviral therapy by PIHIV: A qualitative study among residents of an urban informal settlement in Kenya. *J Health Sci*. 2019;32(1):82–92.
 11. Terrence RP. Factors contributing to clients defaulting antiretroviral treatment at Matoks Capricorn District in Limpopo Province. 2018. (11594495).
 12. Magaço A, Dovel K, Cataldo F, et al. ‘Good health’ as a barrier and facilitator to ART initiation: A qualitative study in the era of test-and-treat in Mozambique. *Cult Health Sex*. 2019;21(9):1059–11073. doi:10.1080/13691058.2018.1535091
 13. Obermeyer CM, Osborn M. The utilization of testing and counseling for HIV: A review of the social and behavioral evidence. *Am J Public Health*. 2007;97(10):1762–1774. doi:10.2105/AJPH.2006.096263
 14. MacPherson P, MacPherson EE, Mwale D, et al. Barriers and facilitators to linkage to ART in primary care: a qualitative study of patients and providers in Blantyre, Malawi. *J Int AIDS Soc*. 2012;15(2):2–10.
 15. Ministry of Health and Population M. Malawi HIV Testing Services Guidelines. Published online 2016. <https://aidsfree.usaid.gov/sites>.
 16. Nkhoma N, Hons BPH, Nyondo-mipando LA, Makanjee C, Myburgh ND, Nyasulu PS. “What will i be doing there among so many women?”: Perceptions on male support in prevention of mother to child services in Lilongwe, Malawi. *Glob Pediatr Health*. 2019;6(7):1–16. doi:10.1177/2333794X19865442
 17. Anney VN, Dar POB, Salaam E. Ensuring the quality of the findings of qualitative research: Looking at trustworthiness criteria. *J Emerg Trends Educ Res Policy Stud*. 2014;5(2):272–281.
 18. Korstjens I, Moser A. Series: Practical guidance to qualitative research. Part 4: Trustworthiness and publishing. *Eur J Gen Pract*. 2018;24(0):120–124. doi:10.1080/13814788.2017.1375092
 19. Ministry of Health and Population M. Malawi Clinical Guidelines for managing HIV and AIDS in Children and adults. Published online 2018.
 20. Candela AG. Exploring the function of member checking. *Qual Rep*. 2019;24(3):619–628.
 21. Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol*. 2006;3(2):77–101. ISSN 1478-0887. doi:10.1191/1478088706qp063oa
 22. Maguire M, Delahunt B. Doing a thematic analysis: A practical, step-by-step guide for learning and teaching scholars. *All Irel J High Educ*. 2017;9(3):335–352. <https://ojs.aishe.org/aishe/index.php/aishe-j/article/view/335/553>.
 23. Danel C, Moh R, Gabillard D, et al. A trial of early antiretrovirals and isoniazid preventive therapy in Africa. *N Engl J Med*. 2015;373(9):808–822. doi:10.1056/NEJMoa1507198.
 24. Cohen MS, McCauley M, Gamble T. HIV treatment as prevention and HPTN 052. *Curr Opin HIV AIDS*. 2013;7(2):99–105. doi:10.1097/COH.0b013e32834f5cf2.HIV
 25. Connor JO, Vjecha MJ, Phillips AN, et al. Effect of immediate initiation of antiretroviral therapy on risk of severe bacterial infections in HIV-positive people with CD4 cell counts of more than 500 cells per μ L: Secondary outcome results from a randomised controlled trial. *Lancet HIV*. 2017;3018(16):4–11. doi:10.1016/S2352-3018(16)30216-8.
 26. Beattie TSH, Bhattacharjee P, Suresh M, Isac S, Ramesh BM, Moses S. Personal, interpersonal and structural challenges to accessing HIV testing, treatment and care services among female sex workers, men who have sex with men and transgenders in Karnataka state, South India. *J Epidemiol Community Health*. 2012;66(Suppl 2):ii42–ii48. doi:10.1136/jech-2011-200475
 27. Musheke M, Bond V, Merten S. Deterrents to HIV-patient initiation of antiretroviral therapy in urban Lusaka, Zambia: A qualitative study. *AIDS Patient Care STDS*. 2013;27(4):231–241.
 28. Rujumba J, Neema S, Tumwine JK, Tylleskär T, Heggenhougen HK. Pregnant women’s experiences of routine counselling and testing for HIV in Eastern Uganda: A qualitative study. *BMC Health Serv Res*. 2013;13(1):1–13.
 29. Chandisarewa W, Stranix-chibanda L, Chirapa E, Miller A, Simoyi M. Routine offer of antenatal HIV testing (“opt-out” approach) to prevent mother-to-child transmission of HIV in urban Zimbabwe. *Bull W H O*. 2007;85(11):843–850. doi:10.2471/BLT
 30. Matseke G, Peltzer K, Mohlabane N, Africa S, Africa S. Clients’ perceptions and satisfaction with HIV counselling and testing: A cross-sectional study in 56 HCT sites in South Africa. *J Prim Health Care Fam Med*. 2016;8(1):1–7.
 31. Njeru MK, Blystad A, Shayo EH, Nyamongo IK, Fylkesnes K. Practicing provider-initiated HIV testing in high prevalence settings: Consent concerns and missed preventive opportunities. *BMC Health Serv Res*. 2011;11(1):1–14.
 32. De Wet H, Kagee A. Perceived barriers and facilitators to HIV testing in South African communities. *J Health Psychol*. 2018;23(12):1635–1645. doi:10.1177/1359105316664140

33. Fulton BD, Scheffler RM, Sparkes SP, Auh EY, Vujicic M, Soucat A. Health workforce skill mix and task shifting in low income countries: A review of recent evidence. *Hum Resour Health*. 2011;9(1):1–11.
34. Sustersic M, Gauchet A, Foote A, Bosson JL. How best to use and evaluate patient information leaflets given during a consultation: A systematic review of literature reviews. *Health Expect*. 2017;20(4):531–542. <https://onlinelibrary.wiley.com/doi/full/10.1111/hex.12487>.
35. Kwapong GD, Boateng D, Agyei-baffour P, Addy EA. Health service barriers to HIV testing and counseling among pregnant women attending antenatal clinic; a cross-sectional study. *BMC Health Serv Res*. 2014;14(1):1–10.
36. Ayieko J, Brown L, Anthierens S, et al. “Hurdles on the path to 90-90-90 and beyond”: Qualitative analysis of barriers to engagement in HIV care among individuals in rural East Africa in the context of test-and- treat. *Plos One*. 2018;13(8):1–14.
37. Croxford S, Yin Z, Burns F, et al. Linkage to HIV care following diagnosis in the WHO European Region: A systematic review and meta-analysis, 2006–2017. *PLoS One*. 2018;13(2):e0192403.
38. Toh HS, Yang CT, Yang KL, Ku HC, Liao CT. Reduced economic burden of AIDS-defining illnesses associated with adherence to antiretroviral therapy. *Int J Infect Dis*. 2020;91(57):44–49. doi:10.1016/j.ijid.2019.11.010